

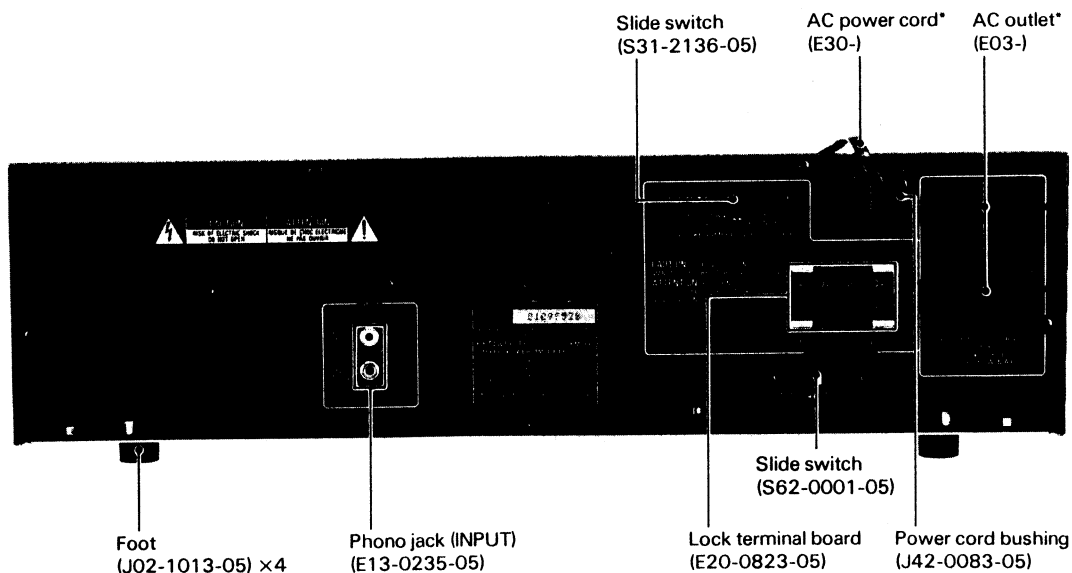
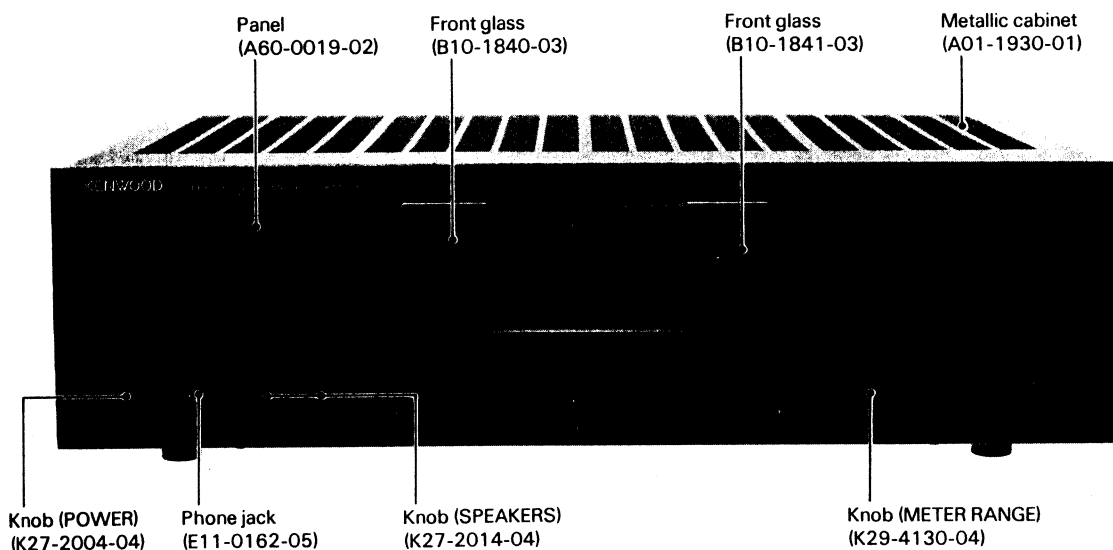
STEREO POWER AMPLIFIER

KM-991

SERVICE MANUAL

KENWOOD

©1991-2 PRINTED IN JAPAN
B51-4287-00(S)2260

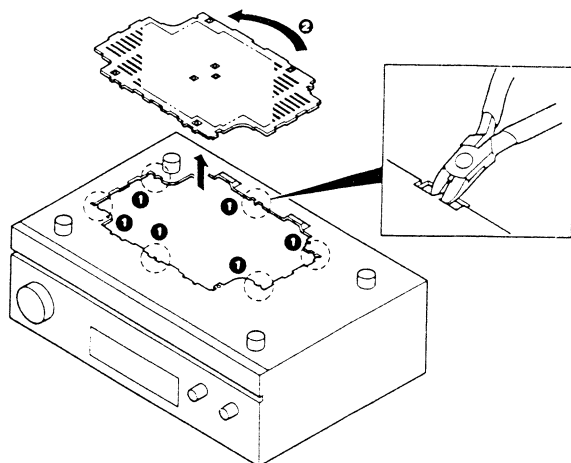


* Refer to parts list on page 12.

DISASSEMBLY FOR REPAIR

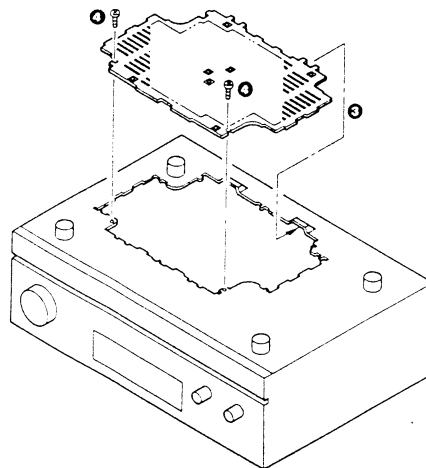
How to remove the repairing chassis

- 1 Cut the 6 parts ❶ of the repairing chassis. Remove the repairing chassis from main chassis.



After repair

- 2 Turn the repairing chassis 180 degrees in the arrow direction ❷.
- 3 Insert the 2 claws ❸ into main chassis.
- 4 Lock to the main chassis by 2 screws (M3 x 6) ❹.



ADJUSTMENT/REGLAGES/ABGLEICH

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTING	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	IDLE CURRENT	—	Connect a DC voltmeter across CP1 (L) CP2 (R)	VOLUME: 0	VR1 (L) VR2 (R)	9~18mV	(a)

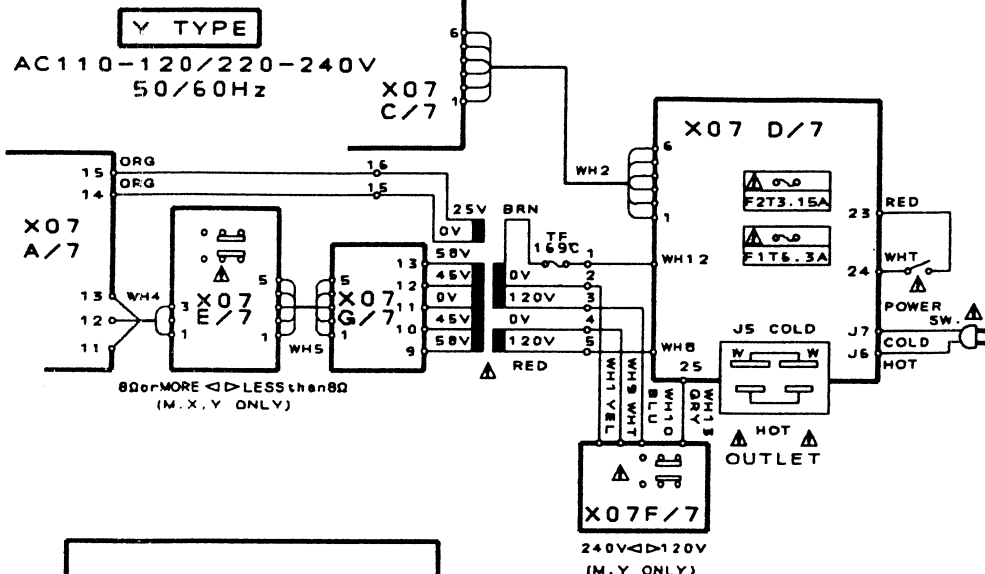
REGLAGES

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINTS DE L'ALIGNMENT	ALIGNER POUR	FIG.
1	COURANT DE POLARISATION	—	Connecter un voltmètre de CC SUR CP1 (G) CP2 (D)	VOLUME: 0	VR1 (G) VR2 (D)	9~18mV	(a)

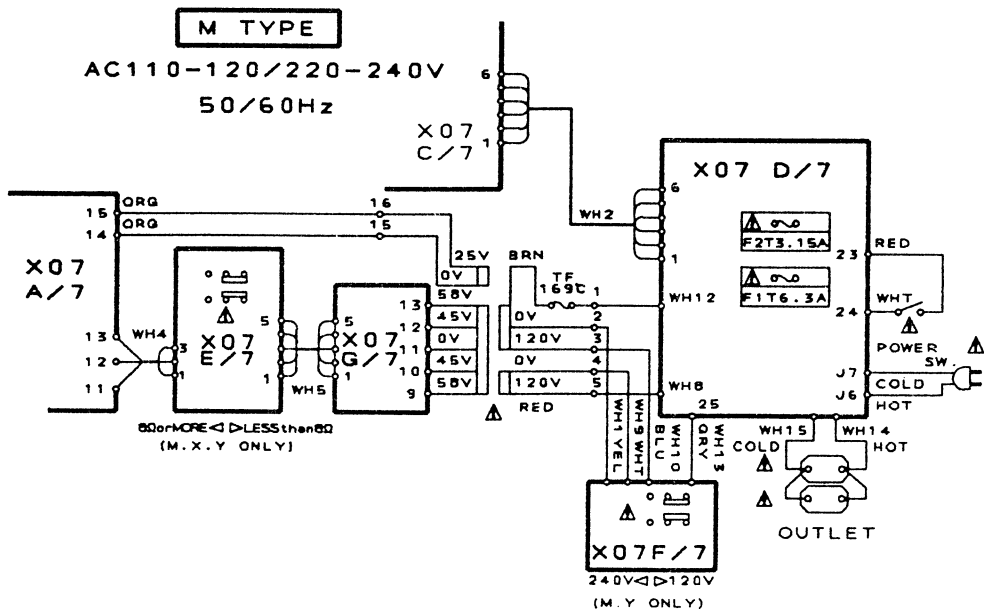
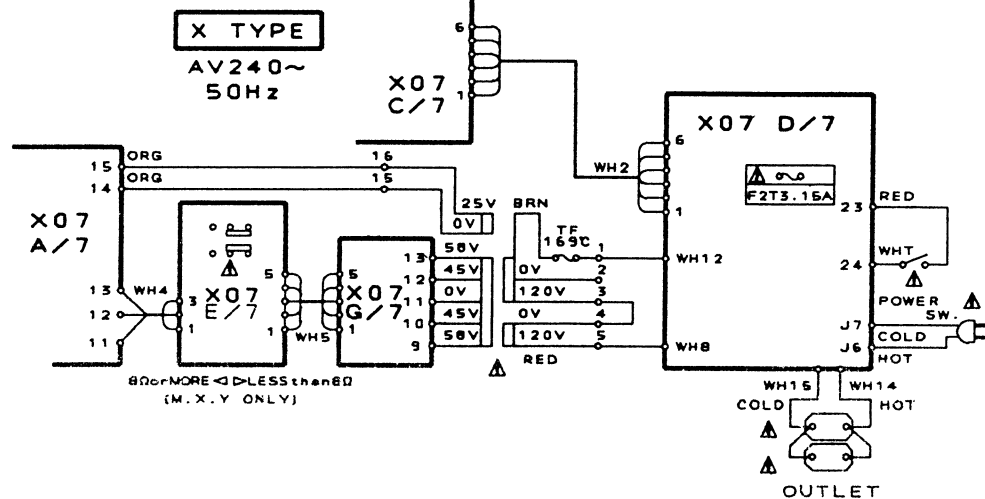
ABGLEICH

NR.	GENGENSTAND	EINGANGS-EINSTELLUNG	AUSANG-EINSTELLUNG	VORSTÄRKER-EINSTELLUNG	ABGLEICHE-PUNKTE	ABGLEICHEN FÜR	ABB.
1	LEERLAUFSTROM	—	Einen Gleichspannungsmesser über CP1 (L) CP2 (R) anschließen.	VOLUME: 0	VR1 (L) VR2 (R)	9~18mV	(a)

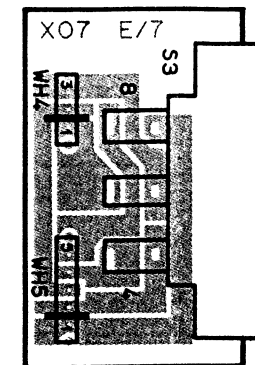
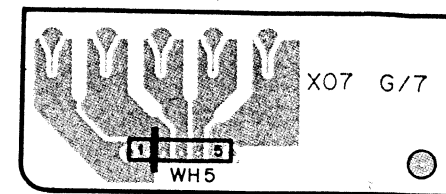
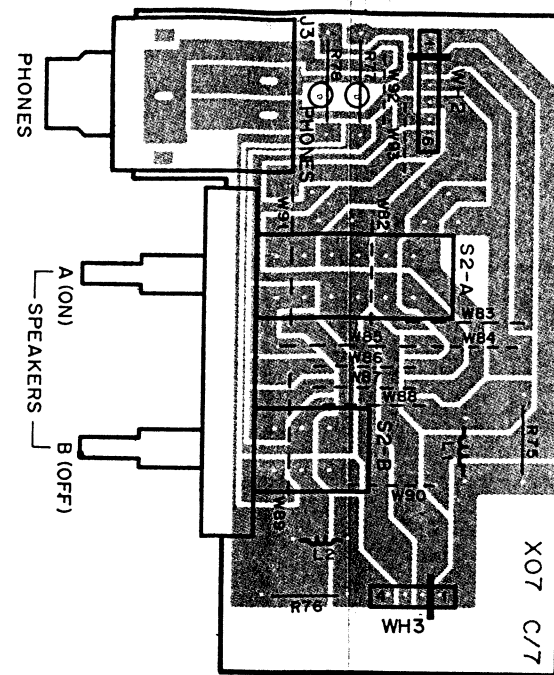
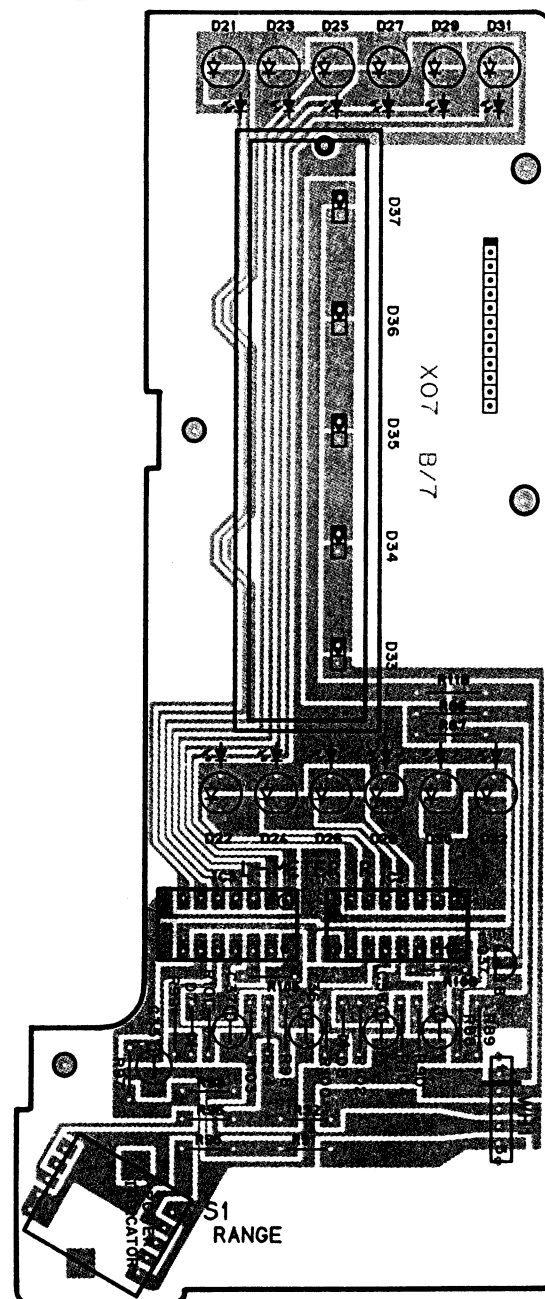
WIRING DIAGRAM



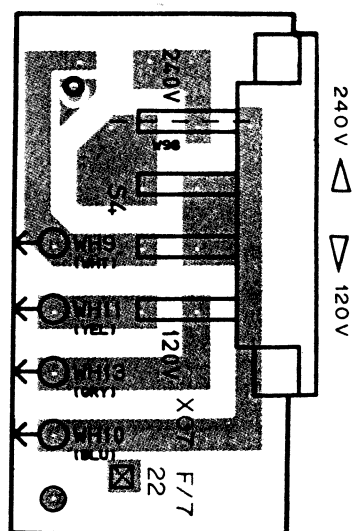
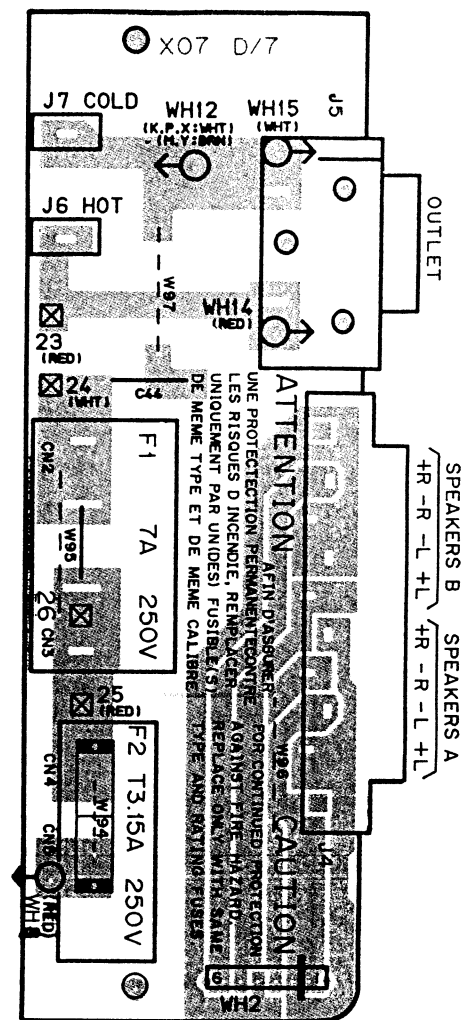
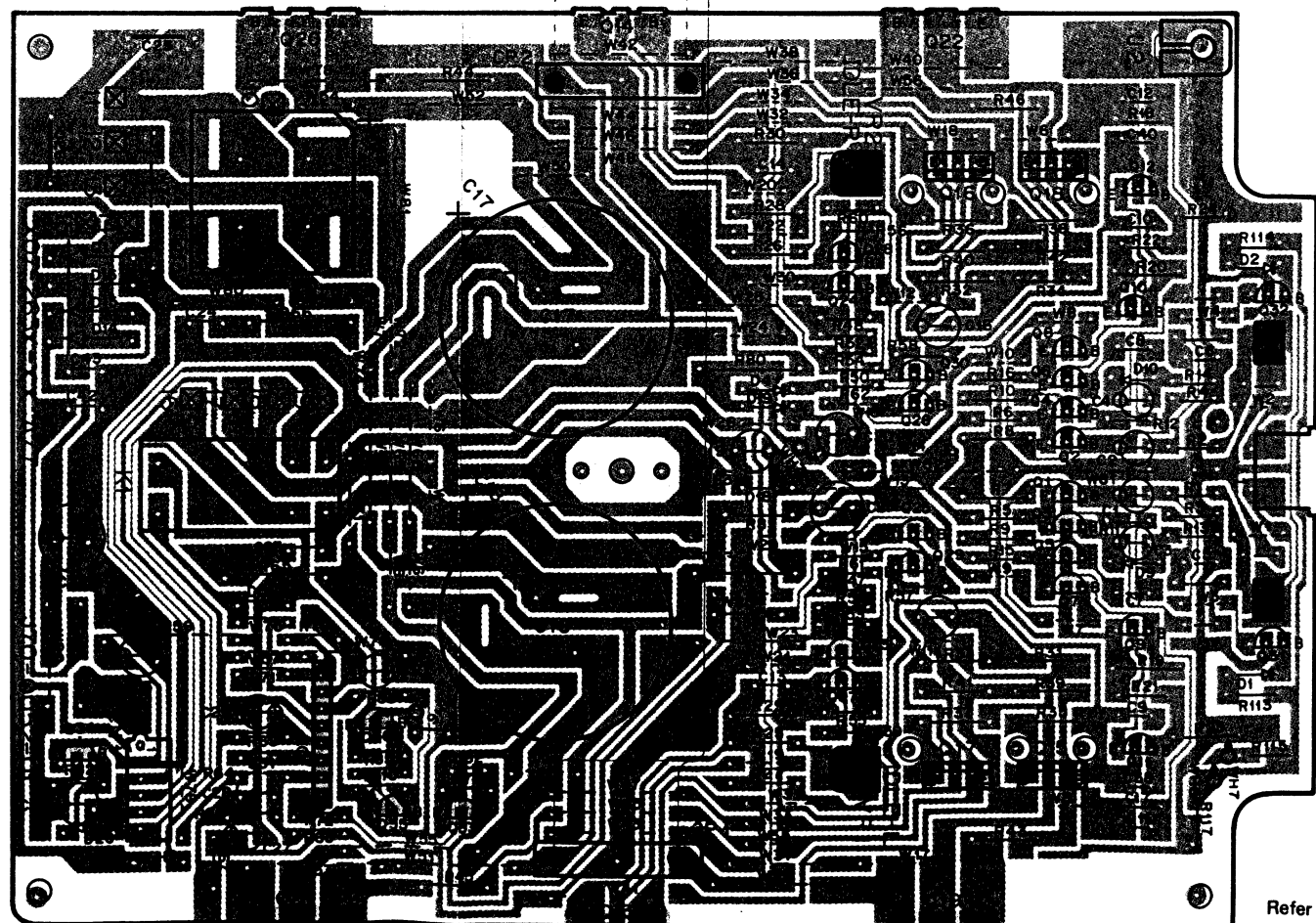
	X07-263X-XX
X	0-71
M	0-21
Y	2-91
K . P	0-10



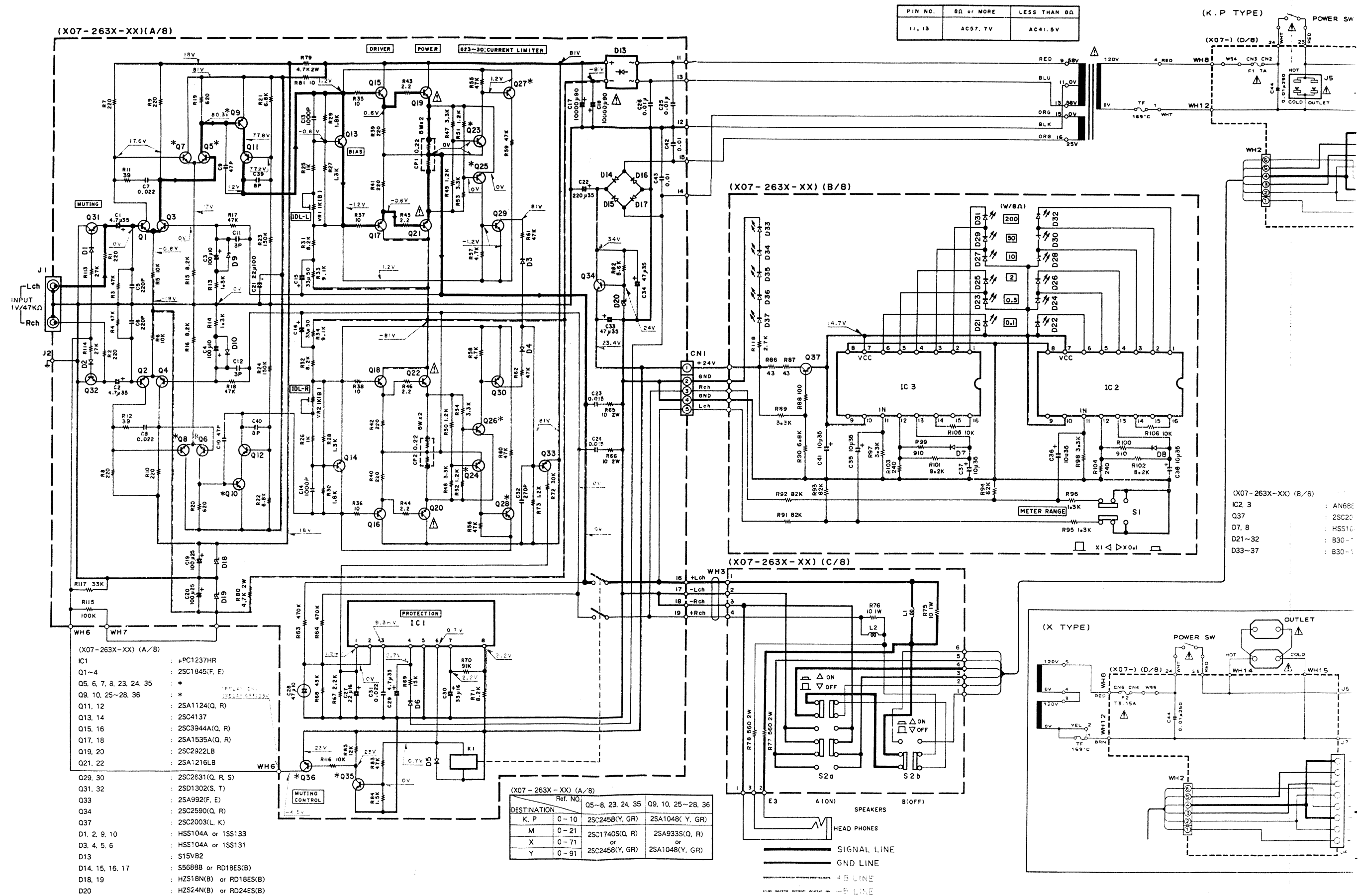
PC BOARD (Component side view)

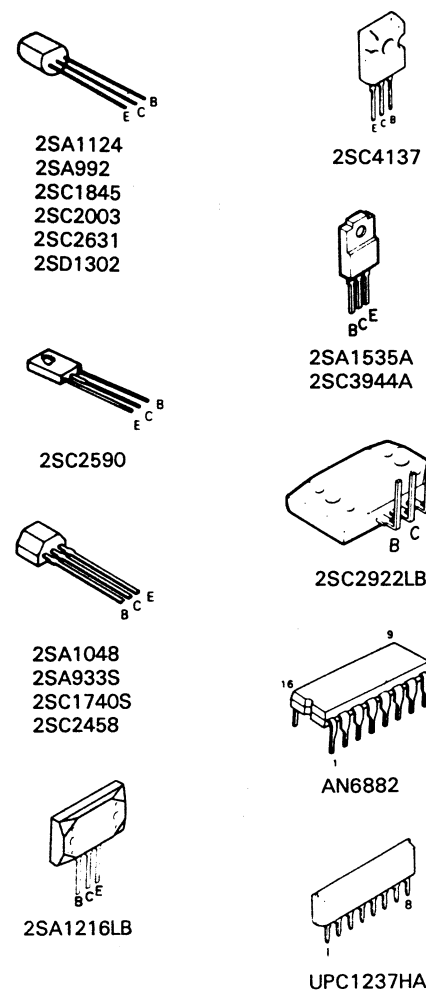
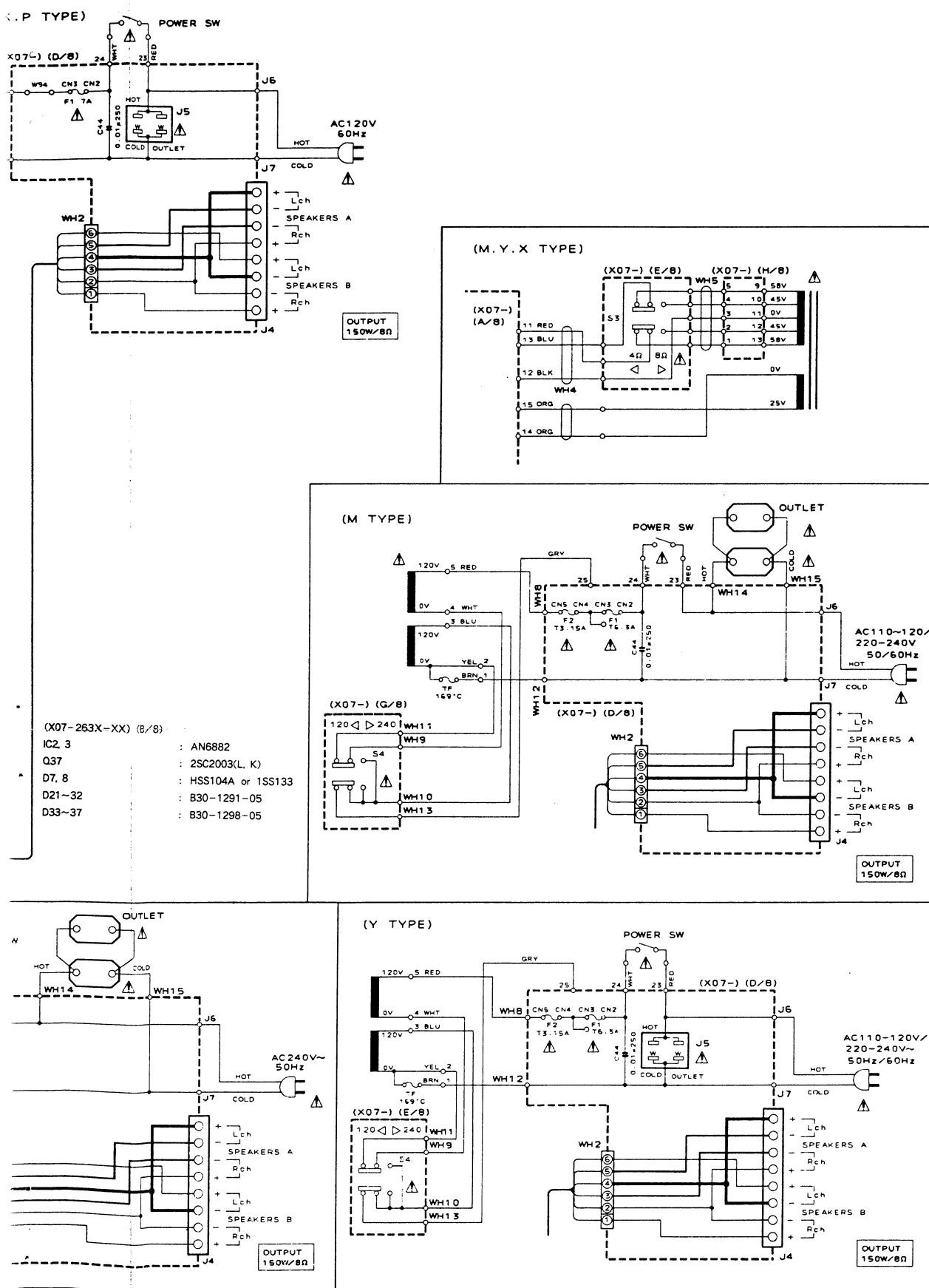


DC Voltmeter
(a) Idle current: 9 ~ 18 mV



Refer to the schematic diagram for the values of resistors and capacitors.





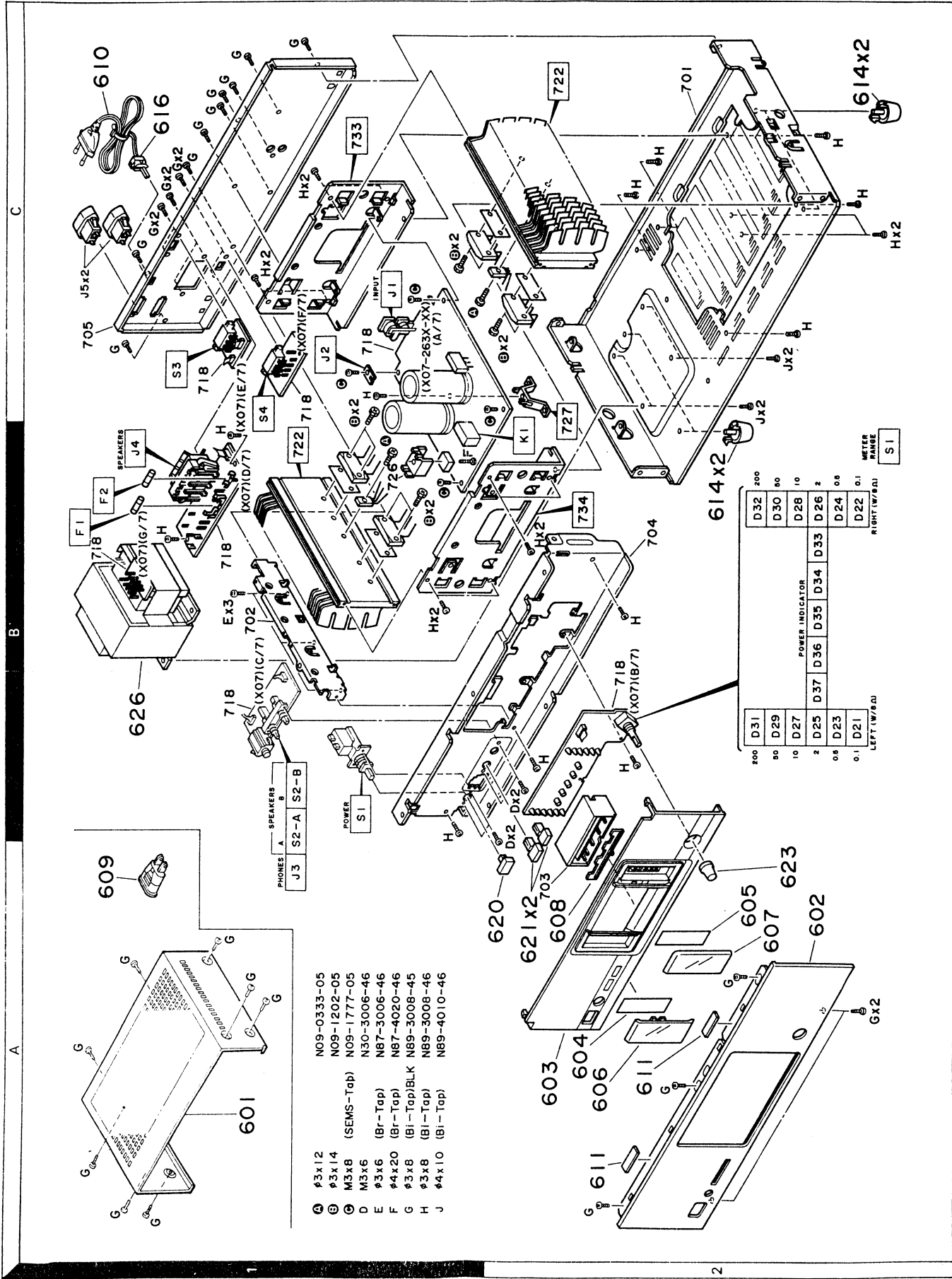
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). **⚠** Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or units.

Les tensions d.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

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EXPLODED VIEW (MECHANISM UNIT)

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnés dans le Parts No. ne sont pas fournis.
Teil ohne Parts No. werden nicht geliefert.

Destination list

	JAPAN MADE
KM-991	K, P, M, X, Y

Main amplifier unit

X07-2630-10	KM-991K, P
X07-2630-21	KM-991M
X07-2630-71	KM-991X
X07-2632-91	KM-991Y

No. 1

Ref. No.	Address	Parts No.	Description	Destination
601	1A	A01-1930-01	METALLIC CABINET	K
602	2A	A60-0019-02	PANEL	Y
603	2A, 2B	B01-0478-01	PANEL ESCUTCHEON	Y
604	2A	B03-2691-04	DRESSING PLATE	X
605	2A	B03-2692-04	DRESSING PLATE	P
606	2A	B10-1840-03	FRONT GLASS L	M
607	2A	B10-1841-03	FRONT GLASS R	M
608	2A	B12-0156-04	INDICATOR	Y
-	-	B46-0092-03	WARRANTY CARD	P
-	-	B46-0094-03	WARRANTY CARD	M
-	-	B46-0095-03	WARRANTY CARD	M
-	-	B46-0096-23	WARRANTY CARD	Y
-	-	B46-0121-03	WARRANTY CARD	X
-	-	B58-0513-04	CAUTION CARD (PRESET220-240)	P
-	-	B60-0338-00	INSTRUCTION MANUAL (ENGLISH)	Y
-	-	B60-0339-00	INSTRUCTION MANUAL (FRENCH)	P
-	-	B60-0340-00	INSTRUCTION MANUAL (SP, AL, CH)	M
609	1A	E03-0115-05	AC PLUG ADAPTER	M
610	1C	E30-0612-05	AC POWER CORD	M
610	1C	E30-0612-05	AC POWER CORD	Y
610	1C	E30-1341-05	AC POWER CORD	X
610	1C	E30-2209-05	AC POWER CORD	KP
611	1C	E03-0055-05	AC OUTLET	M
611	1C	E03-0114-05	AC OUTLET	X
611	2A	G11-0155-14	SOFT TAPE (40X9X2)	
-	-	H50-0017-04	ITEM CARTON CASE	
-	-	H10-3979-12	POLYSTYRENE FOAMED FIXTURE	
-	-	H25-0232-04	PROTECTION BAG (750X350X0.03)	
-	-	H25-0232-04	PROTECTION BAG (235X350X0.03)	
614	2B, 2C	J02-1013-05	FOOT	
616	1C	J42-0083-05	POWER CORD BUSHING	
620	2A	K27-2004-04	KN08 (BUTTON) POWER	
621	2A	K27-2014-04	KN08 (BUTTON) SPEAKERS	
623	2A	K29-4130-04	KN08 (BUTTON) METER RANGE	
626	1B	L01-7901-05	POWER TRANSFORMER	KP
626	1B	L01-7905-05	POWER TRANSFORMER	YMX
D	2A, 2B	N30-3006-46	PAN HEAD MACHIN SCREW	
E	2B	N87-3006-46	BRAZIER HEAD TAPITE SCREW	
C	1A, 1B	N89-3008-45	BRASS HEAD TAPITE SCREW	
H	1B, 1C	N89-3008-45	BRASS HEAD TAPITE SCREW	
J	2C	N89-4010-46	BINDING HEAD TAPITE SCREW	
S1	1B	S40-1094-05	PUSH SWITCH (POWER)	
MAIN AMPLIFIER UNIT (X07-2630-10, K, P, O-21-M, O-71-X, 2-91-Y)				
D31-32		B30-1291-05	LED(LN21CPSLX(V)-(TA4))	
D33-37		B30-1298-05	LED(SEL1213C LC02)	
C1, 2		GE04LV14V7M	ELECTR0 4.7UF 35WV	
C3, 4		GE04LV1A101M	ELECTR0 100UF 10WV	
C5, 6		GC45FSL1H221J	CERAMIC 220PF	J

E: Scandinavia & Europe K: USA P: Canada
Y: PX (Far East, Hawaii) T: England M: Other Areas
Y: AMES (Europe) X: Australia

Δ indicates safety critical components.

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PARTS LIST

PARTS LIST

No. 2					No. 3				
Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考	Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
C7 ,8		CQ92FM1H223J	MYLAR	0.022UF J	R75 ,76		RS14XB3A100J	FL-PR00F RS 10	
C9 ,10		CC45FSL1H470J	CERAMIC	47PF J	R77 ,78		RS14XB3D561J	FL-PR00F RS S60	J 1W
C11 ,12		CC45FSL1H030C	CERAMIC	3.0PF C	R79 ,80		RS14XB3D472J	FL-PR00F RS 4.7K	J 2W
C13 ,14		CQ92FM1H102J	MYLAR	1000PF J	R81		RD14GB2E100J	FL-PR00F RD 10	J 1/4W
C15 ,16		CE04LW1H330H	ELECTR0	33UF 50WV	VR1 ,2	*	R12-1616-05	TRIMMING POT. 1K	
C17 ,18		C90-1867-05	ELECTR0	10000UF	K1		S51-2078-05	MAGNETIC RELAY	
C19 ,20		CE04LW1E101M	ELECTR0	100UF 25WV	S1		S60-0003-05	ROTARY SWITCH METER RANGE	
C21		CE04LW2A220H	ELECTR0	22UF 100WV	S2		S42-2153-05	MULTIPLE PUSH SWITCH SPEAKERS	
C22		CE04BW1V221M	ELECTR0	220UF 35WV	S3		S31-2136-05	SLIDE SWITCH IMPEDANCE SELECT	
C23 ,24		CQ92FM1H153J	MYLAR	0.015UF J	S4		S62-0001-05	SLIDE SWITCH VOLTAGE SELECT	
C25 ,26		CK45FE2H103P	CERAMIC	0.010UF P	D1 ,2		HSS104	DIODE	YMX
C27		CE04LW1C220H	ELECTR0	22UF 16WV	D1 ,2		SS133	DIODE	YM
C28		C90-1334-05	NP-ELEC	47UF 10WV	D3 ,6		HSS104A	DIODE	
C29		CE04LW1V47M	ELECTR0	4.7UF 35WV	D3 ,6		SS131	DIODE	
C30		CE04LW1C330H	ELECTR0	33UF 16WV	D7 -10		HSS104	DIODE	
C31		CQ92FM1H223J	MYLAR	0.022UF J	D7 -10		SS133	DIODE	
C32		CC45FSL1H271J	CERAMIC	270PF J	D13		S1SVB20	DIODE	
C33 ,34		CE04LW1V470H	ELECTR0	47UF 35WV	D14 -17		S54GB8	DIODE	
C35 -38		CE04LW1V100H	ELECTR0	10UF 35WV	D14 -17		TS0130-100	DIODE	
C39 ,40		CC45FSL1H080D	CERAMIC	8.0PF D	D18 ,19		HZS18N(B)	ZENER DIODE	
C41		CE04LW1V100M	ELECTR0	10UF 35WV	D18 ,19		RD18ES(B)	ZENER DIODE	
C42 ,43		CK45FE1H103Z	CERAMIC	0.010UF Z	D20		HZS24N(B)	ZENER DIODE	
C44		C91-0971-05	FILM	0.010UF 250WV	D20		RD24ES(B)	ZENER DIODE	
J1		E13-0235-05	PHONE JACK	INPUT	IC1		UPC1237HA	IC(POWER AMP)	
J3		E11-0162-05	PHONE JACK	(3P)HEAD PHONE	IC2 ,3		AN6882	IC(7PT LED LEVEL METER DRIVER)	
J4		E20-0823-05	LOCK TERMINAL BOARD(8P)SPEAKERS	KPY	Q1 -4		2SC1845(P,E)	TRANSISTOR	YMX
J5		E03-0117-05	AC OUTLET	KPY	Q5 -8		2SC1740S(Q,R)	TRANSISTOR	
F1		F05-6321-05	FUSE (SEM0)	(250V T6.3A)	Q5 -8		2SC2458(Y,GR)	TRANSISTOR	
F2		F05-7026-05	FUSE (UL)	(250V T7.3A)	Q9 ,10		2SA1048(Y,GR)	TRANSISTOR	YMX
-		F05-3121-05	FUSE (SEM0)	(250V T3.15A)	Q9 ,10		2SA933S(Q,R)	TRANSISTOR	
-		J13-0055-05	FUSE CLIP		Q11 ,12		2SA1124(Q,R)	TRANSISTOR	
-		J13-0075-05	FUSE CLIP		Q13 ,14		2SC4137	TRANSISTOR	
L1 ,2		L39-0085-05	PHASE-COMPENSATION COIL		Q15 ,16		2SC3944A(Q,R)	TRANSISTOR	
A	1B,1C	N09-0333-05	TAPPING SCREW (3X12)		Q17 ,18		2SA1535A(Q,R)	TRANSISTOR	
B	1B,1C	N09-1202-05	TAPPING SCREW (3X14)		Q19 ,20		2SC2922LB	TRANSISTOR	
C	1B,1C	N09-1777-05	SEMS (TAPITE SCREW)		Q21 ,22		2SA1216LB	TRANSISTOR	YMX
F	1B	N87-4020-46	BRAZIER HEAD TAPITE SCREW		Q23 ,24		2SC2458(Y,GR)	TRANSISTOR	
H	1B,1C	N89-3008-46	BINDING HEAD TAPITE SCREW		Q25 -28		2SA1048(Y,GR)	TRANSISTOR	
CP1 ,2		R90-0826-05	MULTIPLE RESISTOR		Q25 -28		2SA933S(Q,R)	TRANSISTOR	
R7 -10		RD14GB2E221J	FL-PR00F RD 220	J 1/4W	Q29 ,30		2SC2631(R,S)	TRANSISTOR	
R19 ,20		RD14GB2E421J	FL-PR00F RD 620	J 1/4W	Q31 ,32		2SC1302(S,T)	TRANSISTOR	
R25 ,26		RD14GB2E102J	FL-PR00F RD 10K	J 1/4W	Q33		2SA992(F,E)	TRANSISTOR	
R27 ,28		RD14GB2E132J	FL-PR00F RD 1.3K	J 1/4W	Q34		2SC2590(Q,R)	TRANSISTOR	
R29 ,30		RD14NB2E182J	RD	1.8K J 1/4W	Q35		2SC1740S(Q,R)	TRANSISTOR	YMX
R31 ,32		RD14NB2E222J	RD	8.2K J 1/4W	Q35		2SC2458(Y,GR)	TRANSISTOR	
R33 ,34		RD14GB2E912J	FL-PR00F RD 9.1K	J 1/4W	Q36		2SA1048(Y,GR)	TRANSISTOR	
R35 -38		RD14GB2E100J	FL-PR00F RD 10	J 1/4W	Q36		2SA933S(Q,R)	TRANSISTOR	YMX
R39		RD14NB2E221J	RD	220 J 1/4W	Q37		2SC2003(L,K)	TRANSISTOR	
R40 -42		RD14GB2E221J	FL-PR00F RD 220	J 1/4W					
R43 ,44		RD14NB2E2R2J	RD	2.2 J 1/4W					
R45		RD14GB2E2R2J	FL-PR00F RD 2.2	J 1/4W					
R46		RD14NB2E2R2J	RD	2.2 J 1/4W					
R65 ,66		RS14KB3D100J	FL-PR00F RS 10	J 2W					

KM-991

SPECIFICATIONS

For Other Countries

Rated Power Output

(IHF '66) from 20 Hz to 20,000 Hz

0.03% T.H.D. at 8Ω..... 150 W + 150 W

Music Power (8 Ω)..... 310 W + 310 W

Total Harmonic Distortion

20 Hz to 20,000 Hz..... 0.015% at 1/2 rated power into 8Ω

1 kHz..... 0.002% at 1/2 rated power into 8Ω

Inter Modulation Distortion

(60 Hz:7 kHz = 4:1)..... 0.002% at rated power into 8Ω

Frequency Response..... 5 Hz to 200 kHz, +0 dB, -3 dB

Signal-to-Noise Ratio (IHF-A)..... 120 dB (MAIN IN) ..

Damping Factor..... More than 35 at 50 Hz into 8Ω

General

Power Consumption..... 350 W (IEC)

AC outlets

UNSWITCHED..... 2; (Total 200 W max.)

Dimensions..... W: 440 mm

H: 133 mm

D: 276 mm

Weight (Net) 8.6 kg (19.0 lb)

KM-991

SPECIFICATION

For U.S.A. and Canada

Rated Power Output

150 watts per channel minimum RMS, both channels driven, at 8 Ω from 20 Hz to 20,000 Hz with no more than 0.03% total harmonic distortion. (FTC)

Total Harmonic Distortion

20 Hz to 20,000 Hz 0.015% at 1/2 rated power into 8 Ω
1 kHz 0.002% at 1/2 rated power into 8 Ω

Inter Modulation Distortion

(60 Hz:7 kHz = 4:1) 0.002% at rated power into 8 Ω

Frequency Response 5 Hz to 200 kHz, +0 dB, -3 dB

Signal-to-Noise Ratio (IHF-A) 120 dB (MAIN IN)

Damping Factor More than 35 at 50 Hz into 8 Ω

General

Power Consumption 5 A

AC outlets

UNSWITCHED 2; (Total 100 W, 0.8 A max.)

Dimensions W: 440 mm (17-5/8")
H: 133 mm (5-1/4")
D: 276 mm (10-7/8")

Weight (net) 8.6 kg (19.0 lb)

Note:

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Note :

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the Other Areas (M) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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